

Serial No.: 09/683,417  
Attorney Docket No.: F-428

Patent

### **REMARKS**

Claims 1 -25 were currently pending in the Application. The Examiner has maintained the restriction requirement and made the restriction final. Applicant has canceled claims 1-6, 12-13 and 16 without prejudice or disclaimer and reserve the right to pursue those or other claims in another application. Applicant has added new claims 26-34 which are supported by the specification in at least paragraphs 40, 45, 48 and 63. Applicant has amended claims 7, 8 and 17. Applicant respectfully requests entry of the above amendments and consideration of the enclosed remarks. Applicant submits that no new matter is added. Accordingly, claims 7-11, and 14-15, and 17-34 will remain pending in the application.

In section 1 of the Office Action, the Examiner withdrew claims 1-6 from consideration as being drawn to nonelected species. In response, Applicant has canceled claims 1-6 without prejudice or disclaimer.

### **Information Disclosure Statement**

In section 2 of the Office Action, the Examiner objected to the information disclosure statement. Applicant respectfully submits that the information provided complies with the cited rules and procedures as listing a date of publication. Applicant respectfully submits that the publication date of the reference cited by the Applicant on September 11, 2002 and objected to by the Examiner may not be known to be a first publication date to the Applicant. However, Applicant's undersigned attorney printed the Internet page on March 14, 2002 and was made aware of the link on or about February 21, 2002. Accordingly, a publication date for the document submitted is at least as early as March 14, 2002. Applicant respectfully draws the Examiner's attention to a description of a purported device called a "harm away mailbox" and described on February 11, 2003 as "patent pending" at <http://www.astrotoo.com/our-stuff/harmaway.htm>. A copy of the page as of February 11, 2003 is enclosed as an attachment to this Amendment.

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### **Objection to the Drawings**

In section 3 of the Office Action, the Examiner objected to the drawings as allegedly failing to show every feature of the invention specified in the claims. Applicant has submitted a Request for Approval of Drawings on even date herewith enclosing proposed changes to FIGs. 2A – 2C showing spring biased switch 299 as described in at least paragraph 56. Applicant respectfully submits that no new matter is added and request approval of the drawing change.

### **Claim Rejections**

In section 4, the Examiner rejected claims 7-25 under 35 U.S.C. section 112, second paragraph as allegedly failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The rejection of claims 12-13 and 16 are moot.

In response, Applicant traverses the rejection. However, Applicant has amended claims 7 and 8 with merely cosmetic changes that do not change the scope of the invention. Further, Applicant reserves the right to pursue claims of the same or different scope than the original claims.

In section 5, the Examiner alleges that “the mailbox” lacks antecedent basis. Applicant traverses the rejection and submits adequate antecedent basis exists, but solely to expedite prosecution and as a merely cosmetic amendment, Applicant has amended claim 7 to remove the term “system.” The rejection of section 6 is addressed as described above.

In section 7, the Examiner rejected claim 8. Applicant has amended claim 8 to recite “the controller”. In section 8, the Examiner rejected claim 8. Applicant has amended claim 8 to recite “of the decontamination system.” In section 9, the Examiner rejected claim 17. Applicant traverses the rejection and submits that two sources are clearly defined.

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Applicant respectfully submits that the amended claims comply with the requirements of 35 U.S.C. sections 112, second paragraph and respectfully request that the Examiner withdraw the rejection.

In section 11 of the Office Action, the Examiner rejected Claims 7, 8, 16 and 25 under 35 U.S.C. 102(b) as allegedly anticipated by U.S. Patent No. 2,245,762 to Stefani ("Stefani '762"). The rejection of claim 16 is moot.

Applicant respectfully traverses the rejection. Applicant respectfully submits that the cited reference does not fairly teach or suggest decontaminating mail.

However, solely in order to expedite prosecution Applicant has amended claim 7 to recite "at least two additional doors for respective access to at least two mail compartments in the mailbox." Applicant reserves the right to pursue claims of the same or other scope to the original claims in another application. Applicant respectfully submits that the rejection is moot. Applicant respectfully submits that no new matter is added and that the invention as presently claimed in claims 7, 8 and 25 is patentable over the cited reference. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection.

In section 14 of the Office Action, the Examiner rejected Claim 9 under 35 U.S.C. 103(a) as allegedly rendered obvious by Stefani '762 in view of U.S. Patent No. 6,255,103 to Tamaoki, et al. ("Tamaoki '103"). Applicant respectfully traverses the rejection, but solely in order to expedite prosecution has amended claim 7. Applicant reserves the right to pursue claims of the same or other scope to the original claims in another application. Applicant respectfully submits that the rejection is moot. Applicant respectfully submits that no new matter is added and that the invention as presently claims in claim 9 is patentable over the cited references. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection.

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In section 16 of the Office Action, the Examiner rejected Claim 10 under 35 U.S.C. 103(a) as allegedly rendered obvious by Stefani '762 in view of U.S. Patent No. 5,498,394 to Matschke ("Matschke '394"). Applicant respectfully traverses the rejection, but solely in order to expedite prosecution has amended claim 7. Applicant reserves the right to pursue claims of the same or other scope to the original claims in another application. Applicant respectfully submits that the rejection is moot. Applicant respectfully submits that no new matter is added and that the invention as presently claims in claim 10 is patentable over the cited references. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection.

In section 18 of the Office Action, the Examiner rejected Claims 11-15 and 17-24 under 35 U.S.C. 103(a) as allegedly rendered obvious by U.S. Patent No. 2,245,762 to Stefani ("Stefani '762") and alleged admitted prior art. The rejection of claims 12-13 are moot. Applicant respectfully traverses the rejection. Applicant submits that the decontamination sources are known, but that the described systems and processes including decontamination parameters of mail decontamination in a mailbox are not disclosed in the prior art. Applicant respectfully submits that the Examiner has not provided a prima facie showing of obviousness as there was no motivation to combine Stefani '762 with sources other than violet light.

However, solely in order to expedite prosecution, Applicant has amended claim 7. Applicant reserves the right to pursue claims of the same or other scope to the original claims in another application. Applicant respectfully submits that the rejection is moot. Applicant respectfully submits that no new matter is added and that the invention as presently claimed in claims 11, 14-15 and 17-24 is patentable over the cited references. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection.

Accordingly, Applicant submits that the invention as presently claims in claims 7-11, 14-15, 17-34 is patentable over the cited references and in condition for allowance.

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### **CONCLUSION OF REMARKS**

For at least the reasons stated above, it is respectfully submitted that the remaining claims of this application are in condition for allowance and early and favorable action thereon is requested.

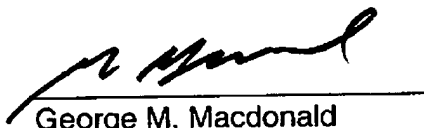
If the Examiner believes that additional issues may be resolved by a telephone interview, the Examiner is respectfully urged to telephone the undersigned attorney for Applicant at (203) 924-3180.

### **AUTHORIZATION**

No fee, other than the fee for the enclosed petition for extension of time, is believed due with this response. However, the Commissioner is hereby authorized to charge any additional fees which may be required for the response or credit any overpayment to the Pitney Bowes, Inc. Deposit Account Number 16-1885, Order No. F-428.

In the event that an extension of time or additional extension of time is required to make this response timely filed, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely. The Commissioner is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the Pitney Bowes, Inc. Deposit Account Number 16-1885, Order No. F-428.

Respectfully submitted,



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## **APPENDIX A**

### **Version with Markings to Show Changes Made**

#### **In the specification:**

Paragraph 56 is amended according to the following marked up version.

Mailbox 210 is preferably airtight when closed. The postal worker opens door 211 using latch 212. The door opens on hinges 214, 216. The controller 250 includes a mail presence sensor such as a light beam system or spring biased switch 299 to detect the presence of mail. When the mailbox is opened, mail is inserted and the mailbox closed, the controller 250 starts a decontamination cycle. The controller lights warning LED 218. The controller initiates radiation sources 230, 232. In this embodiment, the sources include an electron gun to provide 300 KeV soft electrons. The beams sweep through each side of the mailbox using deflector coils against a backstop 240 that will absorb the beam and not produce x-rays. The backstop 240 may include a heat sink to the exterior of the mailbox.

#### **In the claims:**

Claims 7, 8 and 17 have been amended according to the marked up version shown below:

7. (Amended) A mailbox [system] for decontaminating mail comprising:  
a door for allowing access to the interior of the mailbox; [and]  
at least two additional doors for respective access to at least two mail  
compartments in the mailbox; and  
a decontamination system operatively connected to a controller for decontaminating mail.

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8. (Amended) The mailbox of claim 7 further comprising:

[a] the controller having a timer for controlling a decontamination cycle of the decontamination system;

a power supply connected to the controller; and

a display connected to the controller for providing indications.

17. (Amended) The mailbox of claim [16] 8 wherein:

the decontamination system includes an ultra violet light source;

the decontamination system includes a variable frequency microwave beam source; and

the mailbox includes dividers for exposing mail pieces to ultra violet light.

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## **HARM AWAY MAILBOX MANUFACTURING RIGHTS "FOR SALE"**

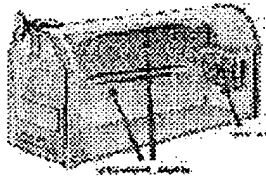
### **Official Laboratory Report**

### **About the Inventors**

### **In The News**

**New mail Decontamination system. Destroy deadly bacteria and virus, INCLUDING ANTHRAX!**

**PATENT PENDING.**



### **Features:**

- **Makes mail safe BEFORE you bring it into your house or business!**

**Effective against Bacteria and Viruses.**

- **Will decontaminate deliberately contaminated or cross-contaminated mail.**

- **Uses well defined characteristics of Ultra Violet-C light and Ozone gas.**

- **Easy installation.**

**All functions are electronically (micro-controller) controlled.**

- **Electronically controlled lamps with over 1 year of operating life.**

- **Automatic decontamination and self-cleaning cycles.**

- **Various models available.**

### **The Current Biological Threat Situation**

Fifty-four Anthrax infection victims in the US and counting! Five deaths resulting from these infections! International mail now proven to be contaminated... all of this in less than 2 months! The bio-terrorists have found the perfect and least costly method of attacking the US. In addition to the known infections and deaths, the US economy is affected as well. We know that some corporations are taking precautions in their mailrooms, we also know that the US government is treating all of its high-level mail. The net effect of this new threat on the economy is, as of yet, immeasurable-

1. Slower mail!
2. Lost or contaminated mail!



3. Workers fearing to open mail!
4. Cost of medicating possibly infected workers!
5. Lost time, lost productivity...

In addition to the economic and national defense problems brought on by this new wave of terror, it is obvious that the millions of households and families remain unprotected! Even if a household's mail is not directly and deliberately contaminated, the probability of cross-contamination is extremely high and has already been proven.

Anthrax was the first step in a series of probable ongoing attacks. The US is bracing itself for future biological threat attacks with other pathogens such as small pox. What can the American family do to protect itself?

At Quantum, we've developed part of the solution.. The Self-Decontaminating Mailbox.

#### What is the Self-Decontaminating Mailbox (SDM)?

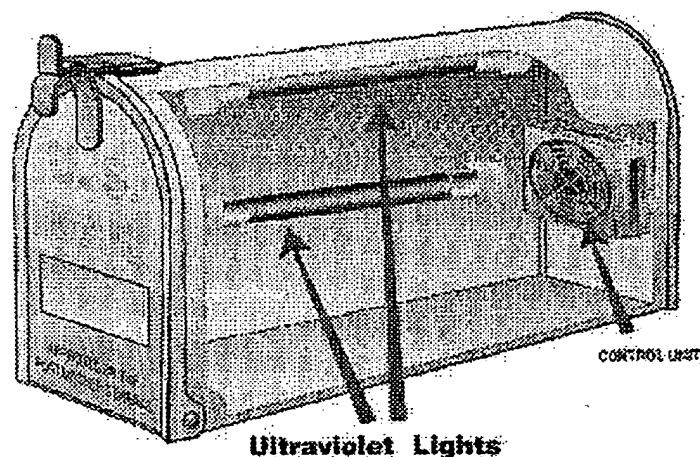
Simply put, the SDM is an electronic system which may be added to any mailbox, and whose operation will result in decontaminating the contents of the mailbox.

#### How does the SDM work?

The SDM system makes use of the well documented decontaminating properties of Ultraviolet light and its collateral production of ozone gas. These methods have been and are currently utilized for all sorts of industrial decontamination- from hospital and surgical tools to the meat industry.

The invention was conceived primarily to aid in reducing potential biological threats involved with mail. As the possibility of millions of households receiving cross-contaminated or even deliberately contaminated mail has been shown to occur, the invention will significantly, if not totally, remove the risk of this contamination being allowed to enter the user's house.

This possible contamination, (direct or indirect), is eliminated by making use of the well-documented characteristics of Ultraviolet light and its collateral production of ozone gas to decontaminate the internal contents of mailboxes. Decontamination of the internal contents of the SDM, occur utilizing 2 simultaneous methods: 1) controlled irradiation provided by extremely concentrated and powerful UV-C light for surface decontamination and 2) penetration of the contents of the SDM (primarily mail, packages etc.) by the quantifiable ozone gas produced as a collateral effect of UV-C.

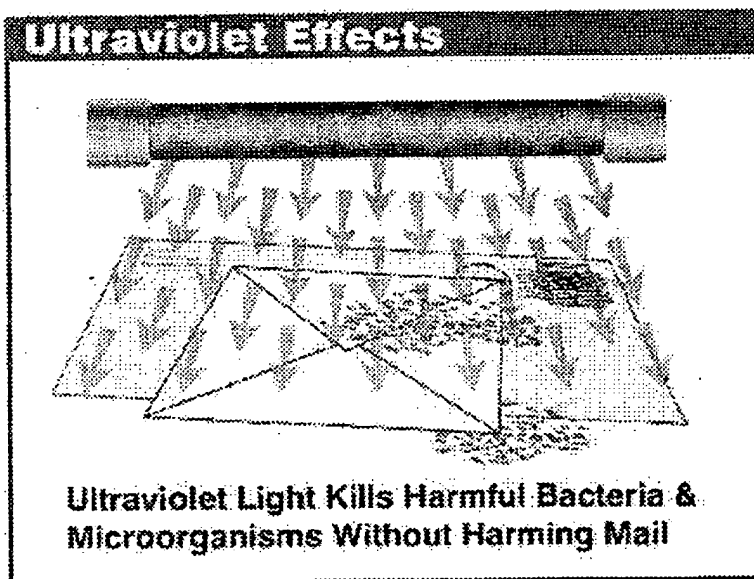


The SDM has three high-power ultraviolet lights that produce 56,000+ micro-watts-second / cm square and ozone production

of approximately 2.4 grams/hr. That's enough to kill virtually any virus or bacteria in seconds! Three 10-watt lamps produce the same germicidal irradiation that is used in many hospital operation rooms worldwide to kill pathogens, such as viruses and bacteria. The deliberate production of over 2.4 grams of ozone gas per hour (by using specially manufactured glass envelopes on the lamps) coupled with an increase in the pressure inside the SDM by means of the mini fan, results in penetration by the ozone of any non air-restricting package contained inside the SDM.

Ultraviolet technology is a non-chemical approach to disinfection. In this method of disinfection, nothing is added which makes this process simple, inexpensive and requires very low maintenance. Ultraviolet purifiers utilize germicidal lamps and these units are designed and calculated to produce a certain dosage of ultraviolet, usually at least 16,000 microwatt seconds per square centimeter but the SDM produces much more than that.

UV-C light is germicidal - i.e., it deactivates the DNA of bacteria, viruses and other pathogens and thus destroys their ability to multiply and cause disease. Specifically, UV-C light causes damage to the nucleic acid of microorganisms by forming covalent bonds between certain adjacent bases in the DNA. The formation of such bonds prevents the DNA from being unzipped for replication, and the organism is unable to reproduce. In fact, when the organism tries to replicate, it dies.



Total irradiation power and the addition of ozone, is strong enough to kill viruses like Infectious Hepatitis and Influenza, bacteria like Bacillus Anthracis (ANTHRAX), TB, Proteus Vulgaris, Typhoid Fever, Cholera, various Streptococcus and Staphylococcus, Legionnaire's Disease, Diphtheria, and many others.

The SDM is completely controlled by its internal micro-controller. The internal computer-

1. Controls the intensity of the UV lamps for maximum external decontamination.
2. Controls the production of ozone gas inside the SDM for maximum internal decontamination.
3. Maintains an internal log of lamp life- it will let you know when its time to replace the lamps.
4. Lets you know when its safe to open the door.
5. Controls the internal cycling of the SDM; knows when to decontaminate or do a self-cleaning cycle.
6. Will shut the SDM down if the door is inadvertently opened.
7. Controls the temperature inside the SDM for maximum decontamination efficiency.

#### **Is the SDM safe to use?**

Yes, without a doubt. The SDM's electronic controls contain several failsafe circuits so that the micro-controller knows when it's safe to turn on the powerful anti-bacterial UV lamps. Some of the failsafes are hidden from view to make it extremely difficult to tamper with the safety mechanisms.

**What about ozone gas, is it safe?**

Only the bacteria and viruses on the mail need worry about the strong ozone. While Ozone is the second most powerful oxidizer known to man, the gas is only active in this form for less than 1 hour. The microprocessor will let you know when it's safe to open the SDM.

**Call today for more details or make offer!**

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